

US EPA RECORDS CENTER REGION 5



466407

Monthly Oversight Report 59  
44728 AES [46526 RAC]  
ACS NPL Site  
Griffith, Indiana  
November 5, 2005 – December 2, 2005



# BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/AES  
American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728  
BVSPC File C.3  
December 15, 2005

Mr. Kevin Adler  
U.S. Environmental Protection Agency  
77 W. Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report  
No. 59 for November 2005

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 59 for November 2005 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email ([campbelllm@bv.com](mailto:campbelllm@bv.com)).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.  
Site Manager

Enclosure

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**Monthly Oversight Summary Report No. 59**  
**ACS Superfund Site**  
**TO 057, 44728.238 (AES) [WA57, 46526.238 (RAC)]**

**Reporting Period:** Month of November (November 4, 2005 – December 2, 2005)

**BVSPC O/S Dates:** November 9 and 15, 2005 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	3	Respondent's General Contractor
U.S. Environmental Protection Agency	1	Federal Regulatory Agency
Indiana Department of Environmental Management	1	State Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	3	Tank Cleanout Contractor
Eclipse	2	Thermox Burner Test Contractor
Austgen	1	General Contractor
Microbac	1	GWTP Sampling Contractor

## Construction Activities

### Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza and Independent Environmental Systems performed major maintenance activity on the groundwater treatment plant and the thermal oxidizer units.
- Montgomery Watson Harza completed installation of the Still Bottoms Pond Area Insitu Soil Vapor Extraction System upgrades and started the system to inject air into the Still Bottoms Pond Area.
- Microbac collected samples from the groundwater treatment plant for routine process monitoring.
- Montgomery Watson Harza held an operation and maintenance meeting on November 15.

**Activities Performed:**

Montgomery Watson Harza (MWH) reported (December 9) that the groundwater treatment plant (GWTP) was operational 86% of the time (26 of 30 days) in November, processing 1,298,179 gallons of groundwater at average rates of 25 to 40 gpm. MWH reported that groundwater was pumped to the plant from all trench and well sources. Microbac collected samples from the GWTP for routine process monitoring.

MWH reported that all active treatment systems were shut down for 4 days during the period November 14-17 for the major annual maintenance of these systems. Such maintenance activities included permitted confined space entry of Independent Environmental Service (IES) personnel into tanks to clean them and repair/replace damaged elements of the equipment.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems, processing vapors through thermal oxidizer units 1 and 2 (thermox 1 and 2).

MWH reported that thermox 1 operated for 25 of the 30 days in November, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 23 of the 46 ISVE wells. MWH reported that thermox 2 operated for 24 of the 30 days in November, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T102. MWH reported that operation of the GWTP continued while thermox 2 was out of service by routing the vapors from aeration tank T102 through thermox 1.

MWH reported that Eclipse, Inc. personnel were onsite on November 22 and December 1 to analyze the burner controllers and test the thermal efficiency of the thermox units. The thermox units were not operating during this burner testing and during the November 14-17 major maintenance activities described previously.

MWH reported that it did not pump product from five ISVE wells in the SBPA, as had been done in previous reporting periods. MWH reported that it will initiate weekly pumping from these wells starting in the next reporting period through the first week in January 2006. The purpose of the increased frequency is to assess if additional product can be recovered.

MWH started the SBPA ISVE air injection system on November 9 and was able to inject air into 15 of the planned 18 wells. Air could not be injected into SVE-60, SVE-66 and SVE-83 utilizing the pressure and flow available from the blower. Additional testing will be performed early in the next reporting period.

MWH reported that the Baker Tank used to collect water extracted from the lower aquifer during the pump test was decontaminated and removed from the site by November 14.

MWH reported that ACS had not reported a recurrence of odors in its break room on the SBPA.

MWH conducted an operations and maintenance (O&M) meeting at its Chicago office on November 15. BVSPC attended this meeting.

Because of the lack of field activity, weekly reports are not attached. Weekly reports will be prepared in the future if there are sufficient field activities to warrant such reporting. However, correspondence, log book notes and photographs of the daily activities are attached. BVSPC conducted oversight of the field activities on November 8 and 15.

**Topics of Concern:** None

**Concern Resolution:** None

**Upcoming Activities:**

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to complete upgrades to the SBPA ISVE system.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA dual phase extraction wells.
- MWH will continue weekly construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

Signature: Larry Campbell

Date: December 15, 2005

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<b>Remedial Progress Report</b>	<b>November-05</b>	<b>Report Date:</b> 12/7/2005																																										
<b>GWTP &amp; Dewatering</b>																																												
The GWTP was operational for 26 days out of 30 days in November (86%). Total Gallons treated = 1,298,179 gallons (from 10/28/05 - 12/7/05)		Tables, Graphs & Figures Table - Effluent Summary Graphs - Off-Site Dewatering Graphs - SBPA Dewatering																																										
<b>SBPA ISVE System</b>																																												
System was operational 25 out of 30 days in November (83%). System monitoring was conducted on 11/23/05. The next monitoring event is scheduled for 12/20/05.		<b>Active Wells (23 of 46 total)</b> <table border="1"> <tr><td>SVE-43</td><td>SVE-67</td></tr> <tr><td>SVE-45</td><td>SVE-68</td></tr> <tr><td>SVE-47</td><td>SVE-70</td></tr> <tr><td>SVE-48</td><td>SVE-71</td></tr> <tr><td>SVE-55</td><td>SVE-74</td></tr> <tr><td>SVE-56</td><td>SVE-75</td></tr> <tr><td>SVE-57</td><td>SVE-76</td></tr> <tr><td>SVE-58</td><td>SVE-83</td></tr> <tr><td>SVE-59</td><td>SVE-85</td></tr> <tr><td>SVE-60</td><td>SVE-86</td></tr> <tr><td>SVE-63</td><td>SVE-87</td></tr> <tr><td>SVE-64</td><td></td></tr> </table>	SVE-43	SVE-67	SVE-45	SVE-68	SVE-47	SVE-70	SVE-48	SVE-71	SVE-55	SVE-74	SVE-56	SVE-75	SVE-57	SVE-76	SVE-58	SVE-83	SVE-59	SVE-85	SVE-60	SVE-86	SVE-63	SVE-87	SVE-64																			
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<b>Off-Site ISVE System</b>																																												
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**Table**  
**Summary of Effluent Analytical Results**  
**Groundwater Treatment System**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Event Date	Month 99 8/15/2005	Month 100 9/13/2005	Month 101 10/10/2005	Effluent Limits	Lab Reporting Limits
pH	7.66 /J	7.55 /J	7.22 /J	6-9	none
TSS	NS	NS	0.8 B/	30	10
BOD	NS	NS	< 2 / UJ	30	2
Arsenic	NS	NS	10.4	50	3.4
Beryllium	NS	NS	ND	NE	0.2
Cadmium	NS	NS	ND	4.1	0.3
Manganese	NS	NS	14.6 /B	NE	10
Mercury	NS	NS	ND	0.02 (w/DL = 0.64)	0.64
Selenium	NS	NS	ND	8.2	4.3
Thallium	NS	NS	ND	NE	5.7
Zinc	NS	NS	2.1B/UB	411	1.2
Benzene	0.50 U/	0.50 U/UJ	0.50 U/	5	0.5
Acetone	2.5 U/UJ	2.5 U/UJ	2.5 U/UJ	6,800	3
2-Butanone	2.5 U/UJ	2.5 U/UJ	2.5 U/	210	3
Chloromethane	0.50 U/UJ	0.50 U/UJ	0.5 U/	NE	0.5
1,4-Dichlorobenzene	0.50 U/	0.50 U/UJ	0.50 U/	NE	0.5
1,1-Dichloroethane	0.50 U/	0.50 U/UJ	0.50 U/	NE	0.5
cis-1,2-Dichloroethene	0.50 U/	0.50 U/UJ	0.50 U/	70	0.5
Ethylbenzene	0.50 U/	0.50 U/UJ	0.50 U/	34	0.5
Methylene chloride	0.50 U/	0.44 J/J	1.0	5	0.6
Tetrachloroethene	0.50 U/	0.50 U/UJ	0.50 U/	5	0.5
Trichloroethene	0.50 U/	0.50 U/UJ	0.50 U/	5	0.5
Vinyl chloride	0.50 U/	0.50 U/UJ	0.50 U/	2	0.5
4-Methyl-2-pentanone	2.5 U/UJ	2.5 U/UJ	2.5 U/	15	3
bis (2-Chloroethyl) ether	NS	NS	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	NS	NS	1.7 J/UB	6	6
4 - Methylphenol	NS	NS	ND	34	10
Isophorone	NS	NS	ND	50	10
Pentachlorophenol	NS	NS	ND	1	1
PCB/Aroclor-1016	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

**Notes:**

Bolded result indicates a exceedence of the discharge limit  
pH data is expressed in S.U.

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NS = This analyte was not sampled or analyzed for

NE = No effluent limit established.

DL = Detection limit

\* = Approved SW-846 method is incapable of achieving effluent limit.

**DRAFT VERSION**

**For Informational Purposes Only**

Not all data presented here has been validated

Notes and suffix definitions have not been updated.

**Suffix Definitions:**

/ = Data qualifier added by laboratory

/\_ = Data qualifier added by data validator

J = Result is estimated

B = Compound is also detected in the blank

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value

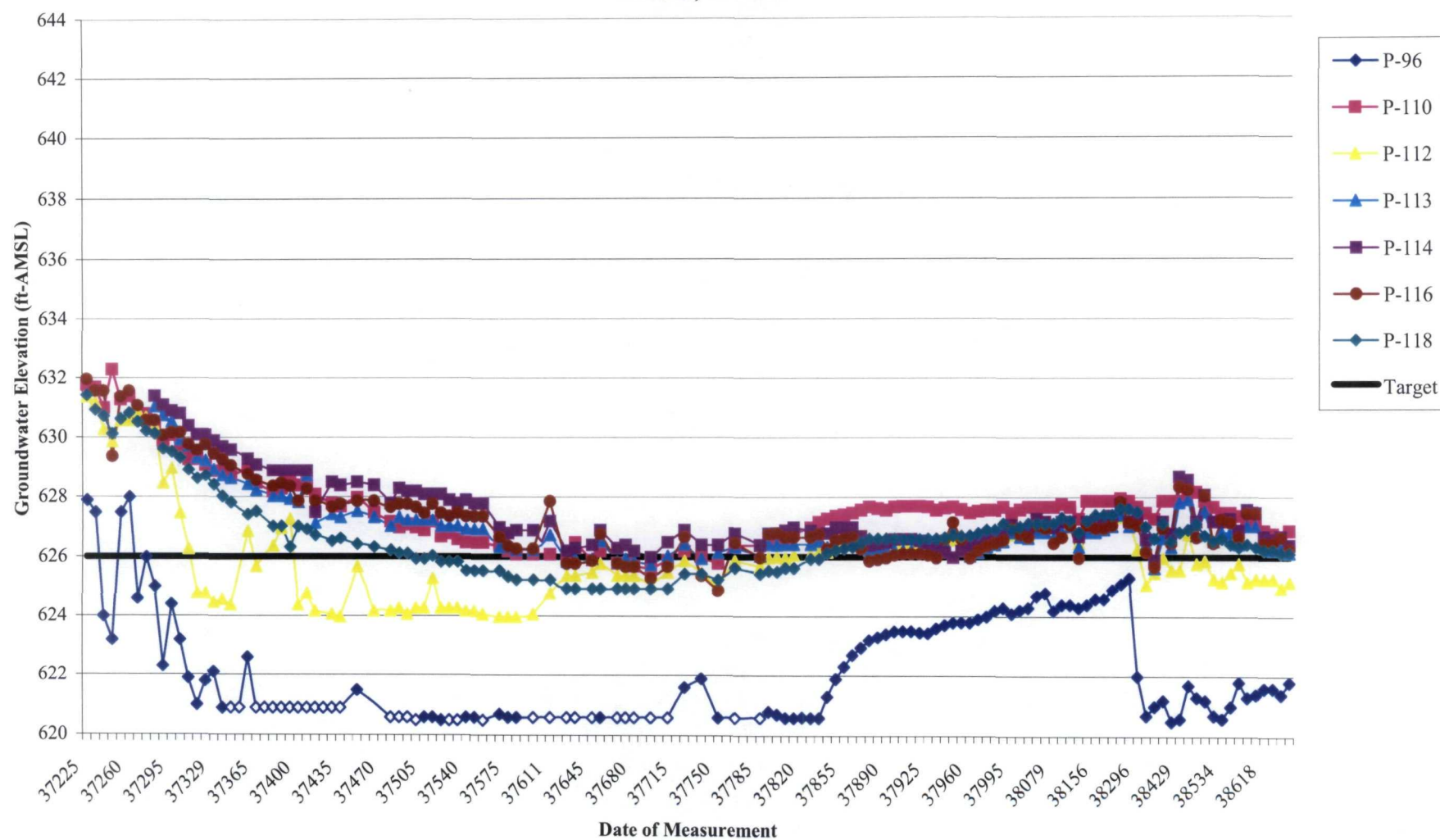
JB = Result is detected below the reporting limit and is an estimated concentration.

The compound is also detected in the method blank resulting in a potential high bias

UB = Compound or analyte is not detected at or above the indicated concentration due to blank contamination

UBJ = Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

**Figure**  
**Off-Site Water Level Status - Piezometers**  
**Groundwater Monitoring**  
**ACS NPL Site**  
**Griffith, Indiana**



Note:

Hollow points represent dry piezometers

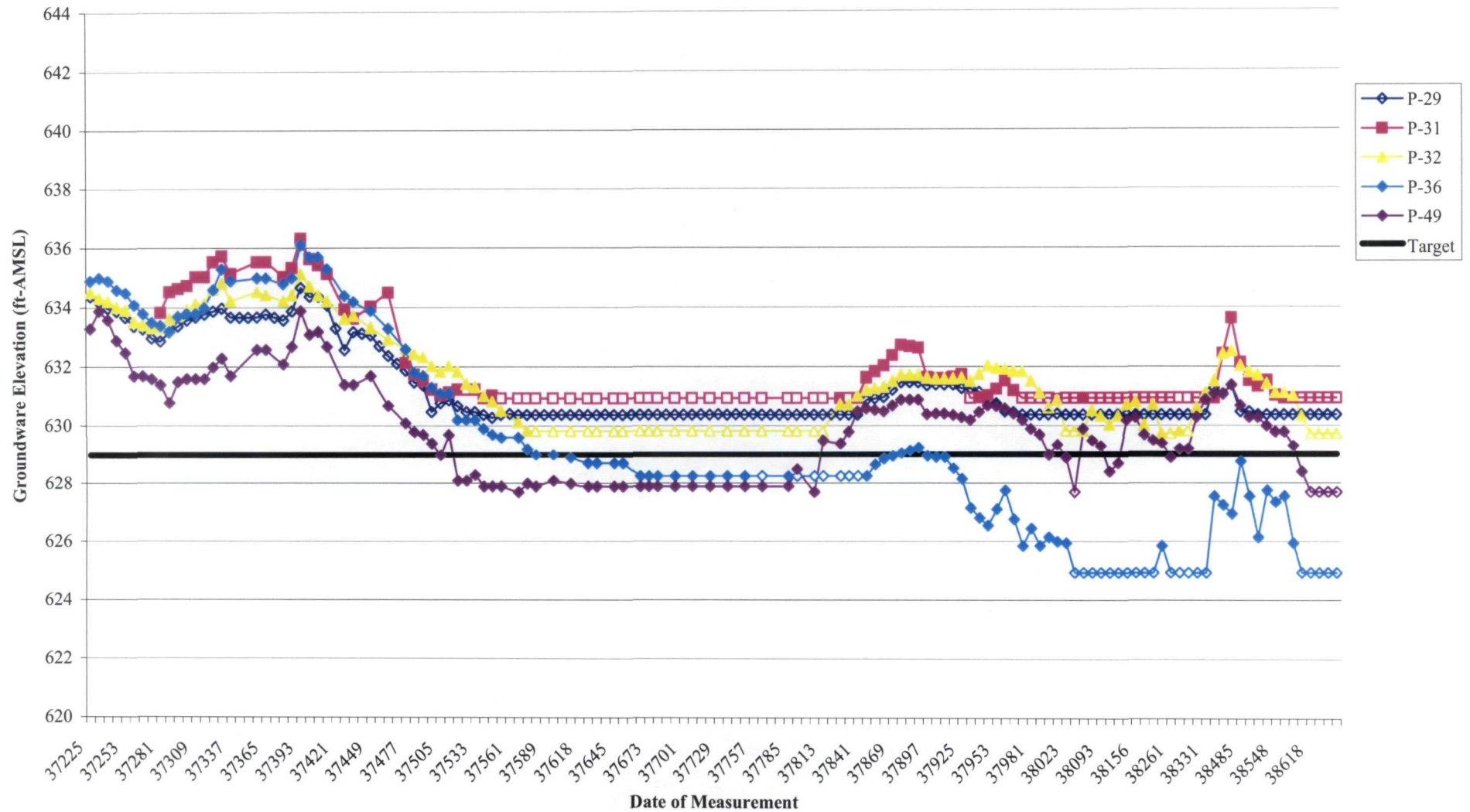
(data used for graphing purposes only). The bottom elevation of the piezometers may vary due to silting

ALC/jmf

J:/209/0603/0301/BWES and Dewatering Data/SBPA and Off-Site water levels.xls/Off-Site Chart



**Figure**  
**SBPA Water Level Status**  
**ACS NPL Site**  
**Griffith, Indiana**



**Table 4**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-14 (VOCs)**  
**September 2005**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	Sampled 9/15/2005			
		SBPA ISVE		Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	49,000		38,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	390	J/J	200	J/J
1,1-Dichloroethane	ppbv	5,900		5,200	
1,1-Dichloroethene	ppbv	3,400		2,900	
1,2-Dichloroethane	ppbv	720	J/J	1,600	
1,2-Dichloropropane	ppbv	1,000	J/J	430	J/J
2-Butanone (Methyl Ethyl Ketone)	ppbv	2,800	J/J	14,000	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	2,000	J/J	9,400	
Acetone	ppbv	6,000		26,000	
Benzene	ppbv	24,000		30,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	2,400	J/J	2,300	J/J
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	ND	U	ND	U
Chloroform	ppbv	12,000		3,700	
Chloromethane	ppbv	ND	U/R	ND	U/R
cis-1,2-Dichloroethene	ppbv	130,000		5,100	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	40,000		19,000	
m,p-Xylene	ppbv	220,000		82,000	
Methylene Chloride	ppbv	29,000	J	75,000	J
o-Xylene	ppbv	94,000		27,000	
Styrene	ppbv	ND	U	1,800	
Tetrachloroethene	ppbv	82,000		33,000	
Toluene	ppbv	300,000		150,000	
trans-1,2-Dichloroethene	ppbv	ND	U	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	47,000		26,000	
Vinyl Chloride	ppbv	3,800		540	J/J
<b>Total</b>	<b>ppbv</b>	<b>1,055,410</b>		<b>553,170</b>	
<b>Total</b>	<b>lb/hr</b>	<b>20.422</b>		<b>11.494</b>	

**Notes:**

\_/\_ - Laboratory data qualifier

/\_ - Data validation qualifier

NC - Not calculated

ND - Non-detect

ppbv - parts per billion volume

lb/hr - pounds per hour

9/15/05 VOCs in lb/hr calculated based on Offsite: 1350 scfm, 80 degrees Fahrenheit (7/11/05)

On-site: 1250 scfm, 105 degrees Fahrenheit (9/15/05)

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

R - Quality control indicates the data is not usable.

**Table 10**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-14 (VOCs)**  
**October 2005**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	Sampled 10/11/2005			
		SBPA ISVE		Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	42,000		28,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	ND	U	250	J/J
1,1-Dichloroethane	ppbv	4,100		3,500	
1,1-Dichloroethene	ppbv	580	J/J	180	J/J
1,2-Dichloroethane	ppbv	510	J/J	960	
1,2-Dichloropropane	ppbv	880		290	J/J
2-Butanone (Methyl Ethyl Ketone)	ppbv	2,200	J/J	10,000	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	ND	U	6,800	
Acetone	ppbv	3,700		12,000	
Benzene	ppbv	21,000		19,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	2,200	J/J	160	J/J
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	360	J/J	ND	U
Chloroethane	ppbv	720	J/J	ND	U
Chloroform	ppbv	8,100		2,200	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	88,000		3,200	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	36,000		19,000	
m,p-Xylene	ppbv	220,000		86,000	
Methylene Chloride	ppbv	6,100		28,000	
o-Xylene	ppbv	96,000		32,000	
Styrene	ppbv	ND	U	ND	U
Tetrachloroethene	ppbv	80,000		29,000	
Toluene	ppbv	300,000		130,000	
trans-1,2-Dichloroethene	ppbv	ND	U	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	40,000		21,000	
Vinyl Chloride	ppbv	2,500		290	J/J
<b>Total</b>	<b>ppbv</b>	<b>954,950</b>		<b>431,830</b>	
<b>Total</b>	<b>lb/hr</b>	<b>18.432</b>		<b>9.537</b>	

**Notes:**

\_/- Laboratory data qualifier

/\_ - Data validation qualifier

NC - Not calculated

ND - Non-detect

ppbv - parts per billion volume

lb/hr - pounds per hour

10/11/05 VOCs in lb/hr calculated based on Offsite: 1394 scfm, 80 degrees Fahrenheit (10/11/05)

On-site: 1250 scfm, 110 degrees Fahrenheit (10/11/05)

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

**Table 13**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs)**  
**October 2005**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	Sampled 10/11/2005			
		SBPA ISVE		Off-Site ISVE	
1,2,4-Trichlorobenzene	µg	1.6		2.1	
1,2-Dichlorobenzene	µg	120		52	
1,3-Dichlorobenzene	µg	10		1.9	
1,4-Dichlorobenzene	µg	28		6.5	
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	0.38	J/J	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	68		12	
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U/R	ND	U/R
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo(a)anthracene	µg	ND	U	ND	U
Benzo(a)pyrene	µg	ND	U	ND	U
Benzo(b)fluoranthene	µg	ND	U	ND	U
Benzo(g,h,i)perylene	µg	ND	U	ND	U
Benzo(k)fluoranthene	µg	ND	U	ND	U
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U
bis(2-Chloroethyl) Ether	µg	ND	U	ND	U
bis(2-Ethylhexyl)phthalate	µg	1.1		0.81	J/J
Butylbenzylphthalate	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz(a,h)anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethylphthalate	µg	0.32	J/J	ND	U
Dimethylphthalate	µg	ND	U	ND	U
di-n-Butylphthalate	µg	0.27	J/J	0.23	J/J
Di-n-Octylphthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	20		5.2	
Hexachlorocyclopentadiene	µg	ND	U	0.63	J/J
Hexachloroethane	µg	ND	U	ND	U
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U
Isophorone	µg	11		31	
Naphthalene	µg	100		56	
Nitrobenzene	µg	ND	U	ND	U
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
<b>Total</b>	µg	<b>360.67</b>		<b>168.37</b>	

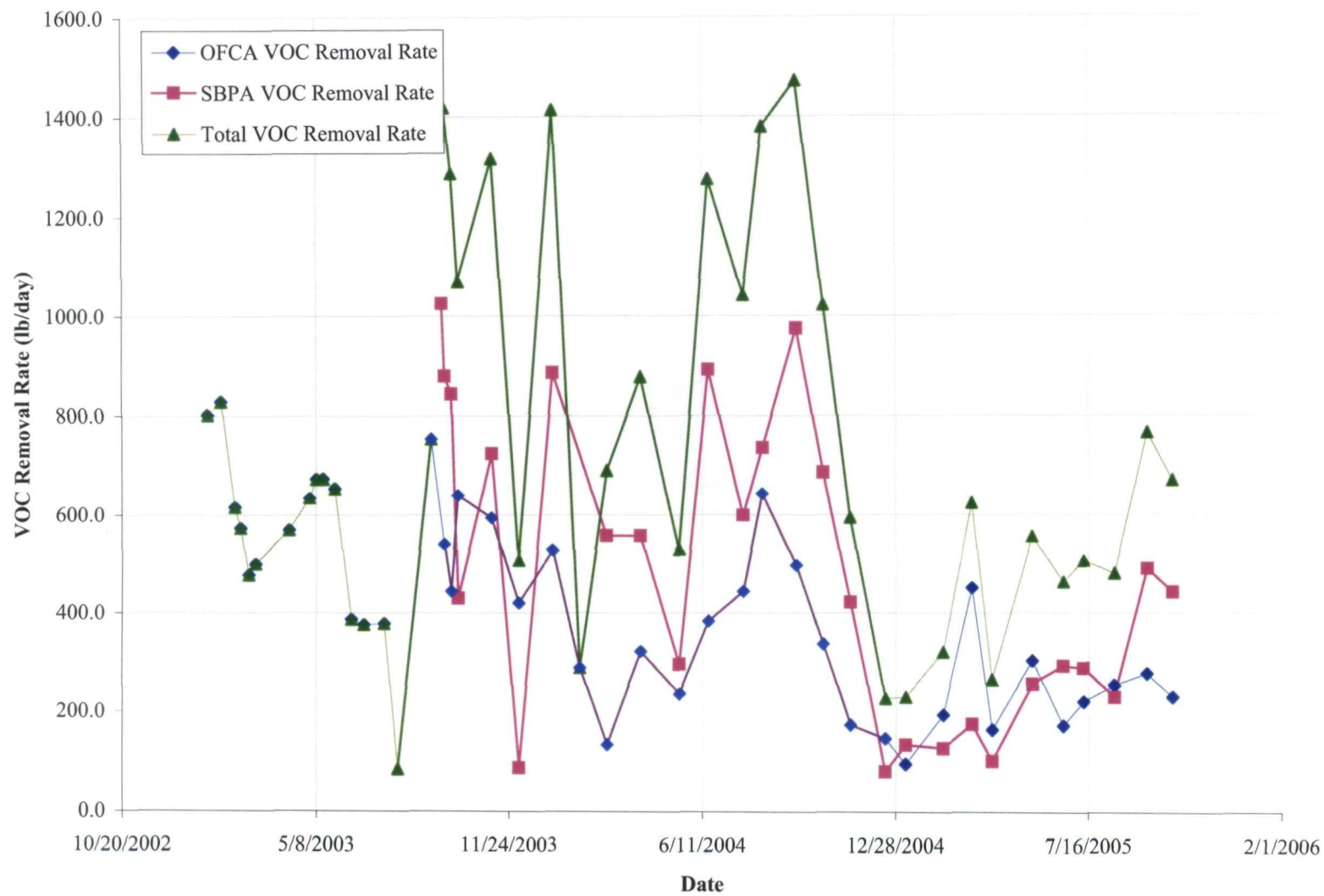
**Notes:**

/ - Laboratory data qualifier  
 /\_ - Data validation qualifier  
 µg - Microgram  
 NC - Not calculated  
 ND - Non-detect

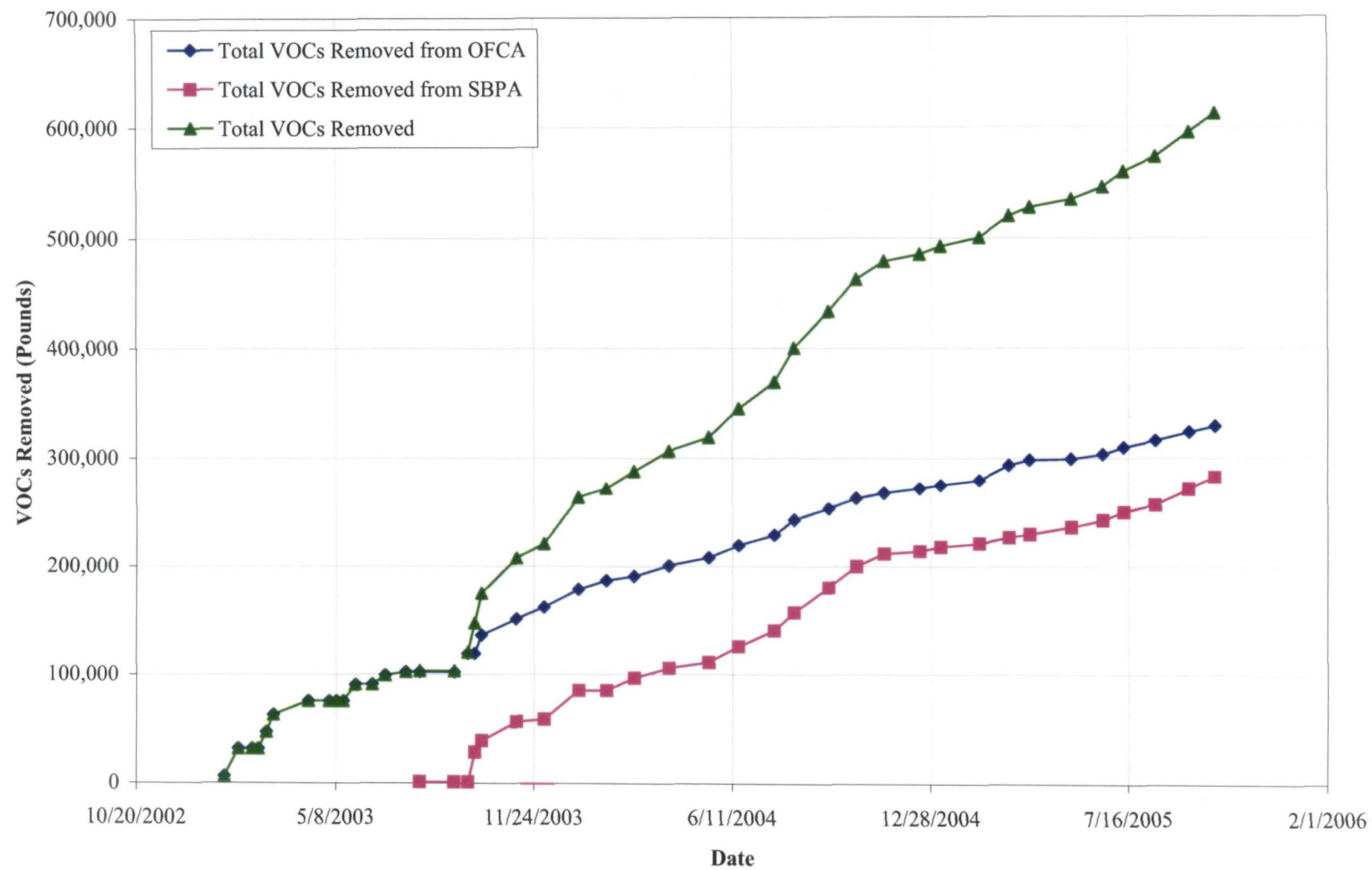
**Qualifiers:**

J - Result is estimated  
 U - Below reported quantitation limit  
 R - Quality control indicates the data is not usable.

**VOC Removal Rate**  
**American Chemical Services NPL Site, Griffith, IN**



# **Total VOCs Removed** **American Chemical Services NPL Site, Griffith, IN**



**SITE STATUS MEETING MINUTES  
FOR NOVEMBER 15, 2005 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Tuesday, November 15, 2005

**MEETING TIME:** 10:00 a.m.

**MEETING LOCATION:** ACS Site

**ATTENDEES:** Kevin Adler – U.S. EPA (via phone)  
Prabakhar Kasarabada - IDEM  
Larry Campbell – Black & Veatch  
Amy Clore – MWH (via phone)  
Chris Daly – MWH (via phone)  
Todd Lewis – MWH (via phone)  
Lee Orosz – MWH  
Peter Vagt – MWH (via phone)

**TOPICS:**

**SITE STATUS**

General Site Health and Safety

On October 31<sup>st</sup>, MWH held a health and safety info session and facility tour for new employees at the ACS Inc. facility. The ACS workers were informed of MWH operations at the site, including past history and future plans.

While conducting the preliminary start-up testing of SBPA ISVE Upgrades on October 20<sup>th</sup>, excess vapors were detected in the blower shed. The cause of the vapors was found to be two loose fittings located on the blower effluent piping. The fittings were replaced and restarted. The subsequent analysis of the area with a photoionization detector (PID) showed in no volatile organic compound (VOC) detections.

During the SBPA ISVE Upgrades startup testing on November 9<sup>th</sup>, caps at two ISVE wells popped off due to the pressure applied. For one of the wells, the cap was reattached and tightened and showed no further problems. When the well cap came off SVE-66, liquid sludge came out of the well and onto the SBPA cover. Less than a cup of the sludge ran into the drainage. The remaining sludge (less than a half a gallon) was collected and placed in the hazardous rollout box. The caps are rated for pressures up to 150 psi and the pressure applied during testing did not exceed 15 psi. To prevent a reoccurrence of this incident, the SVE well caps will be tightened using rope wrenches.

Tailgate safety meetings have been performed daily during the past month, prior to beginning activities associated with the SBPA ISVE System Upgrades, Lower Aquifer Pumping Test, and the treatment plant maintenance activities.

#### Groundwater Treatment Plant (GWTP) Status

The GWTP ran 98 percent throughout the month of October (30.5 out of 31 days). There were no issues since the last meeting on October 7<sup>th</sup>. On November 14<sup>th</sup>, the GWTP was shutdown for annual maintenance. During this time equipment is being inspected and cleaned. The maintenance should be completed by Friday, November 18<sup>th</sup>, and the GWTP restarted at that time. During the GWTP shutdown both the Thermal Oxidizer units and ISVE systems are not operating.

The GWTP was able to process all the water extracted from wells during the development of the new Lower aquifer wells and the pumping test without issue.

#### Off-Site Area/SBPA ISVE Systems

There were no issues regarding operation of the ISVE systems since the last meeting on October 7<sup>th</sup>.

MWH shut down Thermal Oxidizer 1 (ThermOx 1) and Thermal Oxidizer 2 (ThermOx2) for two days in October to assess natural gas usage. Eclipse Inc. is scheduled to come to the Site during the week of November 21<sup>st</sup> to analyze the burner controllers on the ThermOx units and test the thermal efficiency of each unit.

On October 18<sup>th</sup>, Global repaired the heat exchanger and two small holes in the tubing for Thermal Oxidizer 2 (ThermOx 2). The oxidizer temperature probe and air filter were also replaced.

Product removal activities from six wells in the SBPA were performed during October. In order to establish a consistent pumping schedule, MWH will begin pumping product from the ISVE wells at a frequency of once a week through the end of the year.

#### ISVE System Upgrades

The SBPA SVE system was brought online for testing during the week of November 7<sup>th</sup>. Attempts were made to push air into the 18 target ISVE wells. The design memorandum designated 19 wells for air injection; however, since that document was issued SVE-61 has been included in the product recovery program. Air was successfully injected into 15 of the 18 wells. Air could not be injected into three wells (SVE-60, SVE-66, and SVE-83) utilizing the pressure and flow available from the blower. More testing is scheduled to occur beginning on December 1<sup>st</sup>.

#### Lower Aquifer Investigation – Phase 2

Work for the Lower Aquifer pumping test and associated step test began during the last week in October. Development of extraction well EW02 was performed prior to the execution of the pumping test. A step-test was performed using for steps of pumping, each one with a higher gallons per minute pumping (gpm) rate. The step-test was



performed with five one-hour steps: 10 gpm, 20 gpm, 30, gpm, 40 gpm, and 50 gpm. Analysis of the drawdown data at the pumped well and the observation wells showed that the appropriate pumping rate for the longer term pumping test would be 20 gpm. Data collected during the pumping test show good signs of recovery from the lower aquifer. A summary of Phase Two of the Lower Aquifer Investigation, including results from the Lower Aquifer groundwater sampling event, will be prepared for the Agencies and is anticipated to be distributed in January 2006.

Extraction wells located in the Perimeter Groundwater Containment System (PGCS) were shut down beginning September 30, and remained off until completion of the pumping test. MW56 is the only individual well that is currently pumping to the GWTP. All equipment and supplies associated with the pumping test were taken off site as of November 14th.

### LOOK AHEAD

#### Field Events

- SBPA ISVE System Upgrades – December 1-5
- Thermal Oxidizer analysis of burner controllers – November 22

#### Reports

- Monthly Status Report – November 10, 2005
- Quarterly Report, 3rd Quarter 2005 – December 2005

#### Health & Safety Look Ahead

- Vapor monitoring should be conducted during the SBPA ISVE Upgrades. Readings should be collected inside the blower shed and near the injection wells to ensure that vapors are not escaping from beneath the cover.
- Proper procedures should be followed during confined space entry that will be performed during the GWTP maintenance event.

#### Future Meetings

- Monthly Site Status Meeting – Friday, December 9, 2005, 10 a.m. at MWH Chicago office.

ALC/CAD/PJV

\\Uschi4s02\Warrenville\jobs\209\0602 ACS PM\Meetings\Meeting Minutes 2005\ACS Meeting Minutes 11-15-05.doc

9 Nov 05

(17)

1040 Arrive Ruste

Clear, calm, Cool 55°F

Personnel Onsite

Lee Orosz MWH

Terry Frisc Ryan

Mike Bristley Austgen

Chris Daly MWH

Larry Campbell BUSPC

Tim Kirkland Austgen

1050 Disc at Lee. Plan to start

SBPA ISVE upgrade later today

1112 Photo 81-8 looking NW at EW2

Pump test location. After all gear  
has been removed

1130 MWH opened all SBPA ISVE  
wells (except those on product)  
to vacuum.

1135 Photo 81-09 looking W inside blown  
shed as selected wells switched from  
extraction (vacuum) to injection (pressure).

1140 Photo 81-10 looking SW at  
pressure gauges on ISVE 60 showing  
≈ 5 psi injection pressure

1200 - Break for Lunch

1230 Return to checking out SBPA

My Campbell

(98)

- 1315 IE Injection well upgraded  
1245 MWH reinstalled cap on well  
60 that had been blown off  
when well was pressurized.  
1330 Photo 81-11 looking NE at  
MWH using pin to check for  
vapors at injection well SUE 54  
1332 Photo 81-12 looking NE at  
SUE 66 after well top blow off  
when well pressurized. Note  
water and product on surface  
after blown from well  
1344 Photo 81-13 looking NE at  
MWH using squeeze to collect  
solids blown from SUE 66  
1400 ~~Photo~~ MWH went offsite to  
get oil dry to cleanup spill  
at SUE 66  
1445 Photo 81-14 looking SE at  
MWH tightening couplings on  
well top  
1452 Photo 81-15 looking SE at MWH  
cleaning up spill w/ oil dry  
1500 Leave site for day

Jim Campbell

NEV  
15 Dec 05 Tue

(99)

- 0950 Arrive (Pursile)  
Overcast, drizzle, 47°F  
Personnel Enroute  
Lee Cross MWH  
Dan Petach IE  
Tommy Javer IE  
Ryan Lancaster IE  
Terry Frick Reg  
Tim Kirkland Analyst  
Larry Campbell BSR  
Prattaker Kessler IDEM  
1000 O&M Mtg - See notes on pg 101-104  
1052 Photo 81-16 looking NW into  
Tank T2 at heat exchanger being  
cleaned out  
1053 Photo 81-17 looking S into  
Thermax 1 (ME 205B) at air  
inlet - Note oil/gel deposit  
1054 Photo 81-18 looking S at  
damaged #1 (Bating on interior  
of Thermax 1)  
1056 Photo 81-19 looking into  
Tank T102 (Equilization Tank)  
showing main air header. Note

Jim Campbell

(100)

Air diffuser arms have been removed & discarded because they are clogged w/ scale. Will install new arms

1058 Photo 81-20 looking SW at IES preparing to work on Tank TK02

1103 Photo 81-21 looking S into roll off box @ GUTP showing filter cake and discarded corrosion arms

1115 Photo 81-22 looking NW at former location of Baker Tanks

1120 Left SFL for Day

~~Tom Campbell~~

15 NOV 05 Tues  
1000 OAM Mtg Notes

### Attendees

#### \* At Site Trailer

- Lee Orosz MWIT
- Prabakhar Kagerabada - IDEM
- Luvvy Campbell - BUSPC

#### + By Plane

- Pete Vast - MWIT chi. office
- Todd Lewis - MWIT chi. office
- Chris Daly - MWIT chi. office
- Amy Clark - MWIT chi. office
- Kevin Aden - EPA

### Health & Safety - No H&S issues since

last mtg. During air injection of SBPA issue DPE wells, tops of some wells ~~were~~ blew off when well was pressurized. At SUEGL, product & solids were ejected from well casing. MWIT cleaned up small volume.

- On Oct 31 MWIT hosted ACS staff for lunch & tour of GWTP to explain MWIT ops at site
- In Oct 20 testing of SBPA issue air injection, VOCs were detected in

JM Campbell

102

blower shed. MWH ventilated bldg and found loose fittings on PVC blower effluent piping. MWH replaced damaged piping & have observed no VOCs inside shed.

- Tailgate mtgs have been held daily when activities occurring onsite

GWTP - Now shut down during Annual Maintenance of plant. Will be down from NOV 14-17, restart on NOV 18 if no problems.

ISVE Systems - JBPA ISVE system down 2 days in Oct, OFCA ISVE system was down 3 days because of check of natural gas quantities. Didn't find leak in gas lines.

- Global repaired (blocked) 5 tubes in heat exchanger for Thermox 2 on Oct. 18.

- Eclipse will be onsite in Nov 2) to check thermal efficiency of burners on thermox units

ISVE System Upgrade - All equipment has been installed. During week of Nov 7, MWH attempted to push

Jim Campbell

103

air into subsurface through 18 DVE wells. Air was injected into 15 wells but could not be injected into SVE60 SVE66 & SVE83. SUB 61 is product recovery well. More testing will be performed in early December.

Product Removal - Product was pumped from 6 wells in October. MWH will begin pumping for Progradity to see if more product can be removed.

Lower Aquifer Investigation

LA Step test of long term pump test was performed in late Oct & Nov 1-4.

Step test ran at 10, 20, 30, 40 + 50 gpm for 1 hr each.

Pump test ran 66.5 hours <sup>at 20 gpm</sup> recovery test running 2.4 hours. Water level data looks good.

Benzene was detected in MW 53 at 8-10 ppb. w/ trace concentrations found in LA 13 & LA 12.

MWH indicate consideration to pump from MW 53 and to sparge the LA wells.

Jim Campbell

(104)

PGCS was shut down during  
Oct and through completion  
of pump tests  
MWH decontaminated Becker Tank  
used in LA pump tests and removed  
the tank from site on Nov 14,

~~NOT DATA~~

### Look Ahead

- Current Major Maintenance of  
GUTP + thermox
- Eclipse to check thermox burners
- Continue SBPA ISUE Upgrade testing

### H&S Look Ahead

- Confined Space entry into tanks  
during ongoing maintenance  
will be in level B
- Vapor monitoring during SBPA  
ISUE air injection to insure  
vapors not venting thru ~~any~~  
Seams at wells or from ~~edge~~  
edge of cap

Next Mtg - Fri Dec 9 @ 10 AM  
at MWH office

104p mtg over

*Jim Campbell*



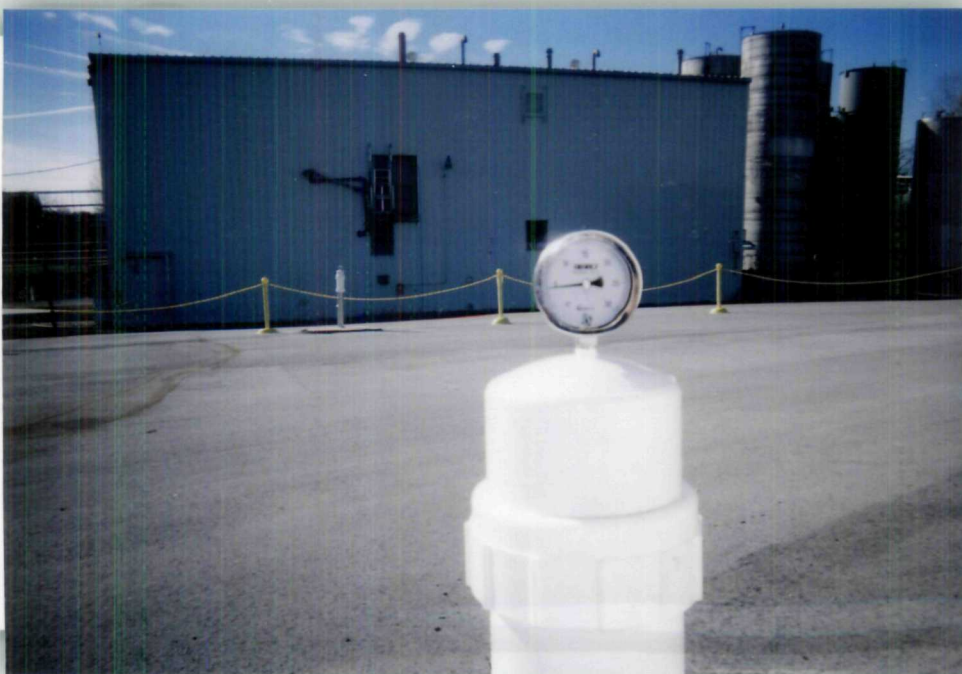


Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #8  
 Date: 11-09-05 Time: 1112  
 Photographer: Larry Campbell  
 Description: Photo facing northwest showing EW02  
 pump test location after all gear has been  
 removed.



Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #9  
 Date: 11-09-05 Time: 1135  
 Photographer: Larry Campbell  
 Description: Photo facing west inside SBPA ISVE  
 blower shed as selected wells are switched  
 from extraction (vacuum) to injection  
 (pressure).





Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #10  
 Date: 11-09-05 Time: 1140  
 Photographer: Larry Campbell  
 Description: Photo facing southwest showing pressure  
 gage on SVE 60 showing ~5 psi injection  
 pressure.



Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #11  
 Date: 11-09-05 Time: 1330  
 Photographer: Larry Campbell  
 Description: Photo facing northeast showing MWH using  
 PID to check for VOCs at injection well  
 SVE 54.





Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #12  
 Date: 11-09-05 Time: 1332  
 Photographer: Larry Campbell  
 Description: Photo facing northeast showing SVE 66 after well top blew off when well was pressurized. Note water and product on surface after being blown from well.



Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #13  
 Date: 11-09-05 Time: 1344  
 Photographer: Larry Campbell  
 Description: Photo facing northeast showing MWH using squeegee to collect solids blown from SVE 66.





Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]

Roll: 81 Photo #14

Date: 11-09-05 Time: 1445

Photographer: Larry Campbell

Description: Photo facing southeast showing MWH  
 tightening couplings on well tops.



Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]

Roll: 81 Photo #15

Date: 11-09-05 Time: 1452

Photographer: Larry Campbell

Description: Photo facing southwest showing MWH  
 cleaning up spill with oil dry.





Site: American Chemical Service, Inc.

Proj. #: 44728 AES [46526 RAC]

Roll: 81 Photo #16

Date: 11-15-05 Time: 1052

Photographer: Larry Campbell

Description: Photo facing northwest looking into Tank T2 showing heat exchanger being cleaned out.



Site: American Chemical Service, Inc.

Proj. #: 44728 AES [46526 RAC]

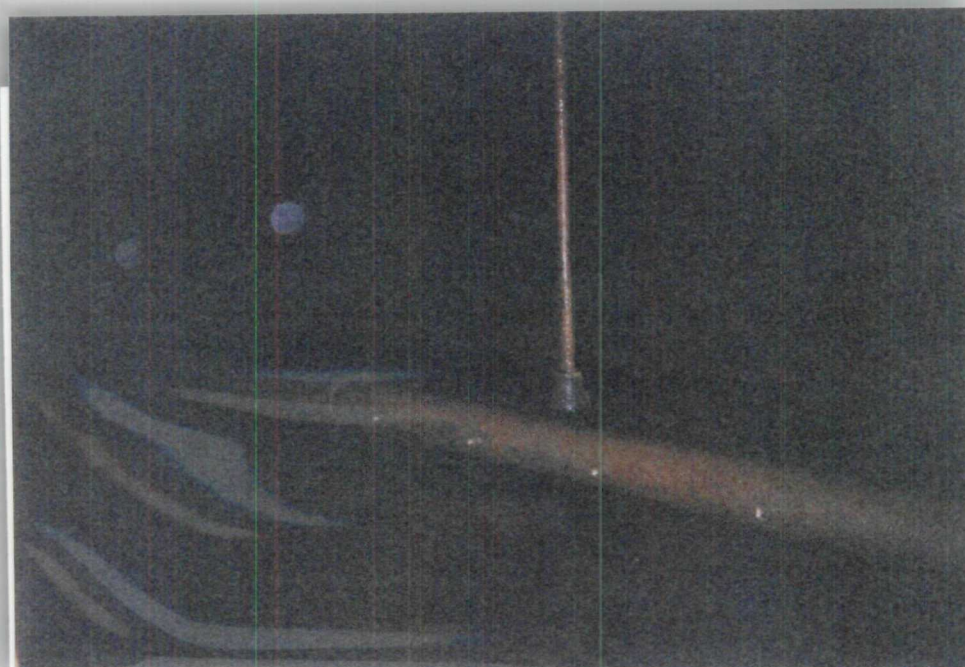
Roll: 81 Photo #17

Date: 11-15-05 Time: 1053

Photographer: Larry Campbell

Description: Photo facing south looking into thermox 1 (ME 205B) showing air inlet and inlet deflector. Note white caked deposit on inlet and deflector.





Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]

Roll: 81 Photo #18

Date: 11-15-05 Time: 1054

Photographer: Larry Campbell

Description: Photo facing south looking into thermox 1  
 showing damaged (peeling) rust colored  
 coating on interior of thermox 1.

Site: American Chemical Service, Inc.

Proj. #: 44728 AES [46526 RAC]

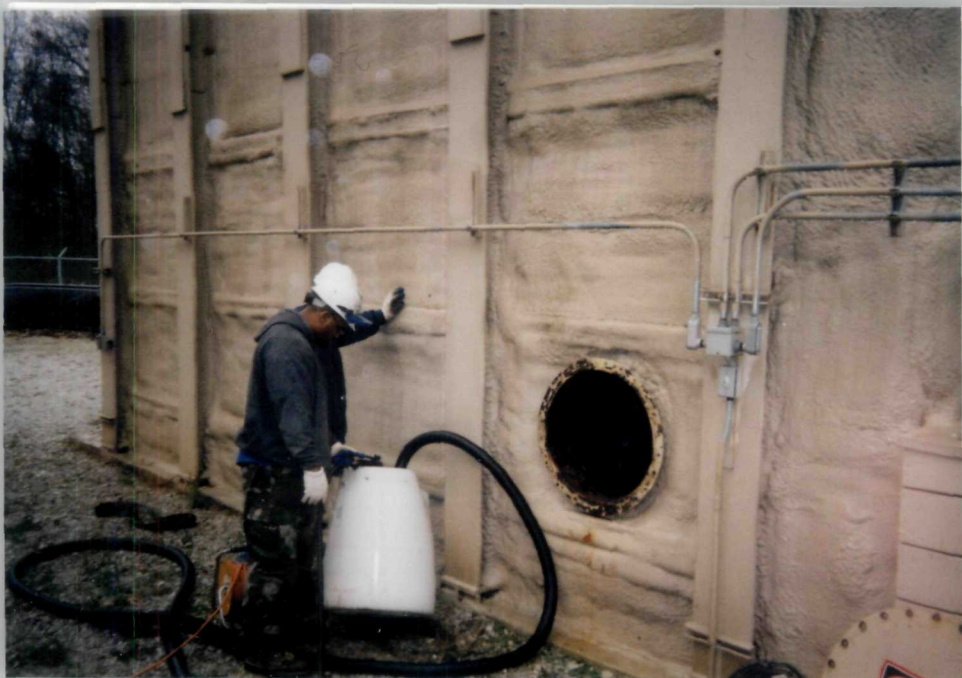
Roll: 81 Photo #19

Date: 11-15-05 Time: 1056

Photographer: Larry Campbell

Description: Photo facing southwest looking into  
 Equalization Tank T102 showing main air  
 diffusion header. Air diffuser arms have  
 been removed and will be replaced.





Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #20  
 Date: 11-15-05 Time: 1058  
 Photographer: Larry Campbell  
 Description: Photo facing southwest showing IES  
 preparing to work on Equalization Tank  
 T102.



Site: American Chemical Service, Inc.  
 Proj. #: 44728 AES [46526 RAC]  
 Roll: 81 Photo #21  
 Date: 11-15-05 Time: 1103  
 Photographer: Larry Campbell  
 Description: Photo facing down into GWTP sludge roll-  
 off box showing discarded air diffusion arms  
 removed from Equalization Tank T102.



Site: American Chemical Service, Inc.

Proj. #: 44728 AES [46526 RAC]

Roll: 81 Photo #22

Date: 11-15-05 Time: 1115

Photographer: Larry Campbell

Description: Photo facing northwest showing former location of Baker Tank used during Lower Aquifer pump test.